R E P O R T R E S U M E S

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HEAD START TELELECTURE PROJECT. A FEASIBILITY STUDY TO ASSESS THE POTENTIAL OF TELELECTURE AS A MEDIUM FOR IN-SERVICE TEACHER TRAINING IN APPALACHIA.

EDUCATION INCORPORATED, CHARLESTON, W.VA.

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THIS DOCUMENT DESCRIBES THE PROCEDURES INVOLVED IN A FEASIBILITY STUDY FOR TELELECTURE IN-SERVICE TEACHER TRAINING IN APPALACHIA. PROCEDURES ARE DISCUSSED IN SIX SECTIONS--(1) PROJECT PLANNING BASED ON A SURVEY OF THE LITERATURE CONCERNING TELELECTURES, (2) SELECTION OF PARTICIPANTS, (3) SELECTION OF TRAINING MATERIALS, (4) PLANNING AND IMPLEMENTING A MATERIALS WORKSHOP, (5) PLANNING AND IMPLEMENTING THE TELELECTURE CONFERENCE SERIES, (6) EVALUATION. A FINAL SECTION GIVES CONCLUSIONS AND RECOMMENDATIONS. A BIBLIOGRAPHY ON TELELECTURES IS INCLUDED. FOR INFORMATION ABOUT THIS DOCUMENT, CONTACT DR. SANDRA M. BROWN, BOX 2469, CHARLESTON, W. VA. (LH)

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HEAD START TELELECTURE PROJECT

A feasibility study to
assess the potential of telelecture
as a medium for in-service teacher training
In Appalachia

EM 005 588

Project conducted for the
~~Appalachia Educational Laboratory~~
by Education, Inc., Charleston, W.Va.
Submitted, August 1967

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I OBJECTIVES

The Head Start telelecture project of the Appalachia Educational Laboratory was designed to assess the feasibility of using telelecture as an in-service teacher tool. Specifically, the project was designed to measure teacher reaction to the use of telelecture and to assess the technical considerations necessary to making telelecture services operational for teacher training in Appalachia.

It should be noted that the Head Start telelecture project was undertaken as a general feasibility study in order to acquaint the Laboratory with the specifics of operational telelecture programs. It was not designed as a quantitative research study, and should be interpreted only as an attempt to collect narrative data in a general exploratory investigation of the telelecture process.

II REVIEW OF THE LITERATURE

Telelecture is a relatively new tool in education. The majority of investigations reported in the use of this medium for education are dated after 1958. Most educational uses of telelecture are thus slightly less than a decade old.

The telelecture technique is an extension of the basic concept of the "conference call" which has been used for many years in business and industry. Through the use of special telelecture equipment, the conference call can be expanded to allow large number of people at many different points to participate simultaneously in a multi-way conversation.

The term telelecture has acquired numerous meanings in education. In its purest sense, it refers to the process by which audiences in one or more locations can hear and respond to a speaker located at a telephone at a distant point. However, the term has now been expanded by educators to include such activities as telephone service for homebound students, and one-way lectures to multiple points.

Telelecture can be combined with facilities for transmitting single-line drawings via devices such as an Electro-Writer (Victor) and Blackboard-by-Wire (Sylvania.) The drawings are done by the telephone lecturer as he speaks and are transmitted on long distance telephone lines to the receiving point. The Electro-Writer requires that the image received be projected on an opaque projector to a classroom screen. The Blackboard-by-Wire technique produces the image directly on a black screen

which resembles that of a television set.

The use of telelecture as a medium for instructing homebound students is frequently reported. Among the numerous school systems which have had experience with this system are Solvay, New York,[1] Floral Park New York and Mt. Ranier, Maryland,[2] and Brewster, New York.[3] Richards Winterstein[4] reports that the school-to-home service of the telephone company had been used in at least 43 states by 1953.

Numerous projects have also been reported in which telelecture has been used to enrich classroom experiences.(See Appendix) A current Title III project on Block Island is using telelecture to provide basic student instruction in mathematics. Teachers from the mainland work with students on a daily basis using telelecture and an Electro-Writer.

The use of telelecture as a teacher training device has not been nearly as widely reported. It is with this aspect of telelecture usage that the present study is concerned.

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1. "Teaching Shut-In Children by Telephone." J.A. Richards. American School Board Journal, 129:25-7, 1954.

2. Push-Button School: Hope for Disabled Kids. W.S. Dutton, Saturday Evening Post,227:25, F12, 1955.

3. I Taught Typing by Telephone: How a Cerebral Palsied Victim was Enabled to Earn a Living. M. Duhrels. Bsns.Ed. World 45:16, April 1965.

4. "Teaching Shut-Ins by Telephone," J.A. Richards, National Association of Secondary-School Principals, April 1956, p.222.

The first major effort directed toward the use of telelecture as a training tool appears to have occurred at Stephens College in 1958.[5] James A. Burkhart, a member of the Stephens faculty during that year, started using the amplified telephone for students in his American Government and Politics Course. During 1959-60, the Office of Education contracted with Stephens for an expansion of this experiment to include more courses and a greater number of speakers. Later, the Ford Foundation's Fund for the Advancement of Education became interested in the idea and funded a project at Stephens in which the telephone lecture projects were shared by Stephens with a number of participating colleges in several states.

A series of two-location conferences was implemented on an experimental basis at the State University of New York during 1965-66.[6] These conferences were conducted by a number of different staff members and were used primarily as sources for class enrichment. Reactions by students and professors were generally good. A few technical difficulties were reported with the equipment, and suggestions were made concerning the providing of greater availability of telephone classrooms and equipment.

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5. "Telephone Network Courses," Harold Rubin, Educational Screen and AudioVisual Guide, March, 1964.

6. "Six Experimental Telelecture Sites Report," John D. Mandelbaum, Educational Screen and AudioVisual Guide, May 1966.

Only two major efforts in the use of telelecture in-service teacher training projects have been reported in the available literature. The first of these was conducted under the auspices of the University of Nevada in cooperation with the Western States Small School Project.[7]

Personnel from five communities participated in the Nevada project. The communities were all in rural areas of the state. The University of Nevada provided a telephone lecture course to these five communities. One graduate or undergraduate credit was offered for the course and teachers participated from their own schools. The course was supplemented with background tapes and reading assignments, and with written examinations. The telelecture presentations usually lasted from forty to forty-five minutes once a week. For a portion of the time, the lecturer discussed the topic for the day. Then time was allotted to the participating students to ask questions and discuss their views concerning the day's topic.

For most of the telelectures, the communities were provided with transparencies that were to be used during the telelecture presentation to emphasize some of the major points that the lecturer wished to make.

The report on the Nevada project made the following recommendations and conclusions concerning the use of telelecture:

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7. Thomas T. Tucker, J. Clark Davis, David L. Jesser, Seminar by Amplified Telephone, Western States Small Schools Project, University of Nevada, Undated.

"A very positive reaction to the telelecture course was indicated by all participants in that they would recommend another telelecture course to their friends."

"The school administrator in each of the communities supervised the program...for future telelecture courses, it is recommended that the people selected as leaders for the course in the communities should be paid an honorarium for accepting the additional work and responsibility".

"The costs of this type of a program are higher than the usual classroom lecture course because of the telephone toll charges. It is recommended that students be charged an additional fee above the regular credit fee to offset the additional costs of the program..

Technical problems can result when the telephone equipment differs between the several schools. Every effort should be made by those concerned...to insure a high degree of compatability of equipment.

There is no doubt in the minds of the instructors that a telelecture course can be taught in a very efficient manner to a large number of people in remote areas of the state. It is recommended that other departments and colleges experiment with this media to provide a service to those people who are not able to attend the university during the academic year because of the geographical problems of distance.

Continuing work with telelecture is being carried out by the Greater Cleveland Educational Research Council.[8] Frequent telelecture conferences are conducted from the Council offices to member schools in the Greater Cleveland area and to several schools in other states. In most instances, these lectures are designed to broadcast to one location at a time, although the council has undertaken several multi-location conferences. Transparencies and printed diagrams are often given to the members of the audience for use as visual guides during the lecture.

No uses of <u>multi-way</u> telelecture conferences for in-service teacher training are reported in the Appalachia area.

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8. "New Approach to In-Service Education," H.S. Davis, Greater Cleveland Social Science Program, <u>Educational Screen and AudioVisual Guide</u>, 45:28-9, May 1966.

III PROCEDURES

The procedure adopted for the conduct of the telelecture project can be divided into six sections; 1) planning of the project based on a survey of the literature, 2) selection of participants, 3) selection of materials for in-service training, 4) planning and implementation of a materials workshop, 5) planning and implementation of the telelecture conference series, and 6) evaluation. These subjects will be discussed in detail in the following paragraphs.

Survey of the Literature

An initial survey of the literature prior to the planning of the telelecture project revealed only beginning attempts to use telelecture as an in-service tool in education. As indicated in the preceding section, the majority of uses of telelecture in education have focused primarily on the use of telelecture as a medium for enriching classroom experiences, for tutoring homebound children, and for providing lecture services to large groups of teachers gathered in a single location. The work of the Greater Cleveland Research Council appears to be one of the few identifiable instances in which attempts have been made to provide in-service training for classroom teachers in numerous locations simultaneously. Not a single instance is reported in the literature in which telelecture had been used in Appalachia as an in-service tool for teachers participating at simultaneously at numerous locations. This dearth of background information on telelecture as an in-service tool in Appalachia

made it obvious that the Laboratory would need to engage in considerable exploratory investigation of the medium if it were to plan to employ telelecture on a functioning basis in its proposed Educational Cooperative.

Selection of Materials

The types of materials which could be used as subject matter for the telelecture project were necessarily limited by the age and skill of the children with whom participating teachers would be working.

Since one of the major program emphases of the Laboratory at the time of initiation of the telelecture project focused on the problem of language development, efforts were made to locate materials which would complement this thrust.

The Readiness in Language Arts series of Behavioral Research Laboratories appeared to be a suitable choice. These materials were published in the spring of 1967. This meant that they would be new to all teachers involved. Furthermore, the materials represented a good mix between the "old" and the "new" in curriculum development. This mix insured that they would be typical of the types of educational innovations which the majority of teachers would conceivably be expected to adopt.

The BRL materials consist of six large Big Books, teachers manuals for each of the books, related teaching aids, and an easel upon which the books are displayed. They deal with beginning language and readiness skills, but are unique in the sense that

their content is "programmed" for more effective instruction. (See brochure) The materials are produced for BRL by Sullivan Associates, a leading publisher of programmed instructional materials in reading and the language arts.

It was obvious after examining the BRL materials that they would lend themselves well to the type of in-service training which was envisioned for the telelecture series. The course content of the materials was familiar enough to teachers so that it did not need much elaboration. However, the concepts of programmed instruction and the idea of specific teaching of language skills in a structured format were sufficiently new to Head Start teachers to make them an ideal basis for in-service training.

Selection of Participants

Since it was imperative that the telelecture feasibility project be conducted at the earliest possible date, it was necessary to confine potential participants as those teachers who would be working in classrooms during the summer. The largest single group of teachers meeting this criterion was that employed in Project Head Start.

Contacts were made in each of the six states served by the Laboratory with communities which planned to conduct Head Start projects during the summer of 1967. These initial contacts were made on a selective basis by employees of the Laboratory and by the Laboratory field staff. Communities to be contacted were selected on the basis of their anticipated degree of cooperation with the Laboratory effort. Discussions were held with representatives

of twenty-four communities which evidenced considerable interest in the project. Of these, eighteen eventually agreed to participate. One of these later dropped out of the program because of a local decision not to conduct a Head Start class during the summer of 1967.

Contacts were made by telephone, personal visit, and personal letter. The majority of successful contacts were achieved through a combination of personal visit by members of the field staff of the Laboratory and subsequent phone conversations and confirming correspondence with Dr. Sandra Brown, coordinator for the project.

Teachers who participated in the project were selected by local superintendents and Head Start directors. These administrators were specifically asked to secure teachers who would be most apt to cooperate in the project and who would be most capable of offering constructive suggestions for the future use of telelecture in the Laboratory's Educational Cooperatives.

Twenty teachers were eventually selected to participate. Six of these worked in pairs at three different locations. The resulting number of project centers was seventeen.

Planning and Implementation of the Materials Workshop

In order to acquaint the participating teachers with the BRL materials, an one and one-half day workshop was held on June 20 and 21 in Charleston. A complete schedule of activities for the workshop is included in the appendix.

At the workshop, teachers were given general orientation to the work of the Appalachia Laboratory. They were instructed in

the use of telelecture equipment and were provided with an initial presentation of the BRL materials by a BRL language consultant. All workshop proceedings were videotaped by the Laboratory.

Planning and Implementation of the Telelecture Series

A series of five weekly telelecture sessions was scheduled to follow-up the activities of the workshop and to allow teachers an opportunity to voice questions and suggestions as they worked with the program. These conferences were scheduled for five weeks in succession beginning the last week in June.

It was originally planned that all seventeen locations would be connected with the central conference center at the offices of Education,Inc. in Charleston. This plan was later abandoned when it was found that the maximum number of points which could be connected with existing telephone company equipment was fourteen.

Initial studies were undertaken to investigate the possibility of hooking two separate circuits to the Charleston center simulateously in order that all seventeen locations might participate at the same time. The telephone company reported that such a hook-up was impossible with their present circuit-bridging capacity. The only remaining alternative was to hook up to independent telelecture conferences, one to be conducted between 2:15 and 2:45 on each of the conference days. This alternative was implemented.

Fourteen locations, including the central conference center, were placed on the first conference circuit. Four locations,

including the central conference center, were placed on the second circuit. Those placed on the second circuit were centers in which there had been delays in securing installation of the telelecture equipment. These centers participated in only three conference calls instead of five.

Original plans for the telelecture project included the installation of traditional telelecture equipment at each of the project centers. This telelecture equipment has two parts, a transmitting unit and a receiving unit. The transmitting unit takes voices from the telephone line and broadcasts them with sufficient volume to allow a small group of people gathered near the transmitter to hear clearly. (The telephone handset is left in its cradle on a regular telephone equipment during this process.) The receiving unit picks up voices and sounds made by the listening group and transmits them to all other locations on the conference circuit.

After consultation with the telephone company, a decision was made to abandon the idea of using telelecture equipment because of the distracting noises which could be caused by feedback entering the circuit through receiving units in such a large number of locations. These noises -- when multiplied by fourteen sites -- could easily have served to drown out a single speaker's voice completely.

Spokesman units with push-to-talk handsets were therefore substituted for the regular telelecture equipment. The Spokesman units provided the same transmitting facilities as the telelecture

transmitter. The push-to-talk handsets, however, allowed for individual control of noise transmission from the participating centers. This control was achieved by operating push-to-talk buttons on the handsets. During the course of the project, it was found that the participants had difficulty manipulating the push-to-talk handsets. An order was therefore placed for special on-off keys to replace the handsets. These proved satisfactory.

Regular telelecture broadcasting equipment was installed at the central conference center at a cost of $95.00 for installation and two months rental.

The C & P Telephone company was requested to place all orders for installation of equipment at each of the participating centers. Most of these orders were handled as directed by C & P. In a few instances, however, satisfactory inter-company telephone cooperation could not be obtained. The telephone company serving Fayetteville, Ohio, for example, was a small independent which refused to use equipment specified by C & P. It also refused the assistance of Bell representatives. Information requested about this telephone company revealed that it is operated on a family basis with very few employees. The equipment which the company chose to install was of Japanese origin and was battery operated. This equipment frequently ommitted a very high-decibel feedback that interfered with the automatic disconnect controls on the telephone long distance circuit. When the decibel rating of the tone reached sufficient levels, the automatic disconnect control went into

operation and dropped the entire conference circuit. This meant that all locations had to be dialed again by the operator in order to re-establish the call.

A second instance of difficulty in installing the Spokesman service was encountered in Speedwell, Tennessee. The school chosen for the telelecture project in Speedwell was not equipped with a phone, and all available access lines were party lines. Although it would have been possible for the Laboratory to install telephone service in the school, it would still not have been feasible to use a party line for conducting the telephone conferences. This situation was solved by the transfer of the participating teacher to another school.

Other difficulties encountered were relatively minor. The telephone company serving Barboursville, Kentucky denied receiving its intercompany service order and was therefore late in installing the necessary equipment. And, in Hillsville, Virginia, an undefinable defect in the telephone equipment continued to continuously interrupt the telephone conferences with feedback interference. Although continuing attempts were made to remediate this situation, the difficulty persisted throughout the entire telephone conference series.

The schedule for each of the telelecture conferences was divided into three sections. The first of these sections was occupied by the setting up of the call itself. Each of the numbers of the conference sequence was dialed by a central conference operator. As each number was connected, the operator requested that the participant at the other end keep the circuit alive by

removing the telephone handset and placing it on a table while other numbers were connected. Each participant was therefore able to monitor the conversation as all succeeding numbers were connected.

The amount of waiting time between connection of the first number dialed and the last number dialed averaged approximately twenty minutes. The central conference center in Charleston had the opportunity of monitoring or not monitoring this procedure. It also had the option of conferring with the conference operator without being heard by the participants who had already been placed on the circuit.

Charges for the telephone conferences were computed beginning at the time when all locations had been connected to the circuit.

As soon as the central conference center was notified that the circuit was complete, it initiated a check-up location poll to insure that all participants could hear the center clearly. Each location was polled by calling the name of the participant and the geographical location. Participants responded by indicating that they were on the line and were receiving the message clearly.

Occasionally during this final check-through, participants at some of the locations did not respond to the poll. Usually this was because the participants had diverted their attention elsewhere and did not hear the conference poll. When polled again at the end of the list, they usually responded. In those

instances where they did not, it was necessary for the conference operator to try to reach them by disconnecting the circuit so that she could re-dial the call when the parties hung up their handsets.

The remaining minutes of the conference were devoted to comments and questions from participating teachers. These comments were usually solicited by an opening question from the project coordinator. The list of participan s was then polled for their individual responses. When only a few participants were expected to respond, the parties were asked to enter the conference circuit by stating their names and locations. The conference coordinator then chose which one was to speak first by recognizing him or her by name. This procedure was found to be quite satisfactory in eliminating the confusion which could have occured if several parties attempted to make their comments at the same time.

With the exception of instances when telephone feedback precluded certain centers from participating in the conferences, all participants were given the opportunity to speak on the circuit at least once during the conference call. Most spoke twice, and several initiated questions directed to other participants.

Evaluation

All conferees were asked to evaluate the content and quality of each telelecture conference by completing a simple rating sheet immediately after each call. These sheets were forwarded in pre-addressed, stamped envelopes to the conference coordinator. (See Appendix)

Conferees were also asked to submit a final comprehensive evaluation of the telelecture series on forms provided by the conference coordinator at the close of the series. (See Appendix.) These forms requested information concerning the participants use and evaluation of the BRL materials, their opinions concerning the value and potential of telelecture, and their suggestions for improvement of future telelecture in-service programs.

Subjective narrative comments were also recorded by the conference coordinator and telephone company representatives during the complete telelecture series. Full reports of these comments were filed at the close of the series.

IV EVALUATION

Four major sources of evaluation information were used to asses the success of the telelecture network.

1. Telelecture forms completed by participants after each telelecture and mailed to the conference coordinator

2. Narrative comments of participants during the telelecture sessions

3. Final evaluation forms completed by participants after the final telelecture session

4. Narrative comments of the conference coordinator as expressed in this report

Telelecture Forms

A set of five telelecture feedback forms (See Appendix) was mailed to all participants after the first telelecture conference. This form called for item-rating on 1) the quality of reception of the coordinator's voice, 2) quality of reception of participants' voices, and 3) usefulness of the suggestions and comments made during the telelecture. The average rating given by participants on the larger circuit to each of these subjects is shown on the following chart. (1 was highest rating; 5 was lowest.)

	Reception of Coordinator	Reception of Participants	Quality of Comments
Conference # 1	1	3	2
Conference # 2	3	5	5
Conference # 3	1	2	1
Conference # 4	2	2	2
Conference # 5	2	2	2

It is obvious from these ratings that the telelecture reception of the coordinator's voice was superior to that of reception of other participants. This difference was probably a function of the special amplifying equipment with which the central coordinator was equipped. No obvious way of eliminating this differential is apparent with present telephone company equipment.

As indicated in the preceding chart, participants' were generally pleased with the telelecture reception and with the content of the lectures themselves. The strong negative ratings for conference # 2 are a function of the technical difficulties encountered which forced the conference to be called off altogether.

Tabulated results for the conferees on the smaller circuit appear as follows: *

	Reception of Coordinator	Reception of Participants	Quality of Comments
Conference # 3	1	3	2
Conference # 4	1	1	1
Conference # 5	1	2	2

* Conferees on the second circuit participated in only the last three calls because of difficult in installing their equipment.

Each rating form contained a section for narrative comments by participants. The comments received were as follows:

Indicate any suggestions you may have for the improvement of the telelecture conferences.

"I feel that if the conference time were longer there could be a better exchange of ideas. There has been some very good ideas and I feel these have helped my teaching this summer."

"This conference was very good as to uses of materials. Voices I could hear. My question was answered as to time and materials to be used - rather than just covering pages. I was pleased to note that the lady who discussed it thought I was right to use films, art, music, stories, drama and other means to make my lessons more impressive - rather than just get through the book. I was surprised that some are in second book."

"After the "key" was installed the reception was very good."

"It would be fine if less time were required to contact participants for the conferences. Those called first have a long wait."

"I think the conferences were well planned, could have been longer, or perhaps each state could have been allocated a certain amount of time. I had with me on this telelecture conference the following people: Dr. Jesse D. Loy, Superintendent of Knox County Schools, Dr. Haggar, from University of Kentucky. I taught a "Demonstrating Lesson" for him along with several others."

" My students are now able to distinguish between their left and right hands. The suggestions proved beneficial."

"I'm not for a work book for Head Start children."

"Since the modification of the equipment, the reception has been excellent."

"I'm certain we could have received more help if we could have heard better. It sounds as though the teachers from Virginia and Kentucky are not talking into the phone, or loud enough."

"Quite satisfactory."

"I thought this conference was very good."

"I was not able to hear voices distinctly. I'm glad you are writing a newsletter for I feel what was being said was very good."

"Reception was quite good. Some people were hard to hear. Some of the teachers suggestions were not helpful at this time because we have gone beyond their point of study. Although they will be helpful in our new classes this fall."

"It would be helpful if the volume could be turned up so we could hear all speakers. If that is not possible, it is nice to have the central lecturer repeat generally the important things said. Working with telelecture has been very enjoyable.

"The only regret I have is that the conferences are at an end. I thank you for the privilege of participating in this study. Best of luck to you in the future."

Narrative Comments by Participants

Narrative comments made during the telelecture conferences by participants paralleled those which they submitted on their evaluation forms. Comments concerning the materials were typical of those recorded on the appendix under "Telelecture Comments--Typical Conference."

Teacher reaction to the BRL materials was almost unanimously enthusiastic. Accounts of activities with the materials were concisely reported and appeared to be well-received by other participants. In many instances, participants reported that they had tried suggestions offered by others in preceding conferences and found them extremely helpful.

Final Evaluation Forms

Two types of information were sought in the final evaluation forms. The first type of information was a request for a direct

assessment of the telelecture series itself. The second was an assessment of teacher reaction to the BRL materials. The latter information was requested in order to ascertain whether or not use of telelecture appeared to increase teacher enthusiasm and interest in the materials.

Teacher responses to two of the items in the final evaulation form are of particular interest to this report. A listing of these responses follows. (See appendix for a copy of the complete evaluation form.)

Please use the following lines to write a summary statement regarding your reactions to the BRL materials.

"I enjoyed working with the BRL materials. The children, in general, sustained interest in it. My group had a wide range of maturity and ability. As a consequence, when we worked in one group, the less mature did not follow the questions well. At times, the bright children seemed bored with the repetitious questions. My reaction, as a teacher was that there was too much repitition for average children.It might be more suitable for groups of less gifted children. I think the telelecture has good possibilities."

"BRL materials were very helpful in my Head Start Kindergarten Class this summer. The movement of the animals, the attractive coloring of the pages, the question and answer plan of the guide held the children's interest throughout the two books we completed. There were some confusing pages in the Big Book. The Alphabet chart did not always have the letters made in the same way as the Big Books. However, I feel the children I taught this summer profited by the Readiness Lessons. They are much better prepared to begin Grade One than the children I taught in the Summer Programs the past two years."

"I enjoyed using the first two books and feel the little folks we worked with have a better start for first grade as a result. All of them know color; also top and bottom. Many of them learned the small letter names; also left and right."

"The BRL materials were just wonderful. I think it is just about one of the most helpful materials ever developed for the

Language Readiness for our five and six year old children. The children were very much interested in the attractiveness and manner of the book. One child remarked,"It is just like a program I watch on TV that continues each day. I just can hardly wait until tomorrow to see what the Lion and Tiger are going to be doing."

"I was favorably impressed. 1) BRL was a time saver, 2) sequence and repetition were excellent in getting the varied materials across, 3) an excellent device for teaching colors, 4) the materials were excellent in developing attention span, 5) materials appealed to the children; motivated their interest; increased their verbal skills and involvement in activities, and 6) helped me to understand my children."

"Using the BRL materials this summer was a most pleasurable and rewarding experience. This group of children were most alert and interested in everything. I thoroughly believe these materials awakened this interest. Used in an informal way but structured to elicit a certain response allowed the children to answer without the pressure which is so often present in school situations."

"The BRL materials are excellent for developing oval language. The most timid and immature children responded. The BRL offers wonderful opportunities for correlation with other materials and the use of supplementary materials. The way the material is presented attracts youngsters."

"This material was the most useful motivator I have used in connection with the Head Start Program. I have been kept busy finding materials in connection with the program, but I enjoyed doing it, and have thoroughly enjoyed using the material. This has been my highlight of the summer . I cannot praise the value of this material enough. To me, it is A number 1."

"I truly enjoyed working with these materials. They help teach the children ideas that could have been very hard for them to learn. It was fun for them and they considered it their own big book and would ask to go over from the beginning many times. The BRL materials would not be as valuable if it was not supplimented with other corresponding activities. There could be a small book with activities to go along with the material. I have been wondering why most of the animals enter from the right. Would it not be better to enter from the left and have the children work from left to right which would be readiness for reading. I am anxious to see how this works on a 4 year old class."

"I found the materials to be very exciting and one of the best things I've ever used to hold the interest of the children."

In the opinion of the conference coordinator, the medium of telelecture contributed materially to stimulating the enthusiasm which is so obviously reflected in the above comments. If this assumption is valid, it should be regarded as an important factor to be considered in evaluating the total worth of telelecture in in-service training.

Please use the following lines to write a summary statement regarding your reactions to the use of telelecture in this project.

"I enjoyed the telelecture conferences very much. I think the content of the conferences made all our waiting well worthwhile. They were very informative and full of good ideas and useful comments."

"Telelecture is a wonderful idea. I received many good ideas from the others and saw how others reacted to the BRL materials. There is still much work to be done on telelecture. Feedback is its main problem but if faster connections could be made it would have been that much better. I feel the telephone people worked very hard on the problems we had."

"The telelecture was a very interesting part of the project. We exchanged ideas in the use of the book. Otherwise we would have been limited to our own ideas."

"I am pleased with the use of telelecture. Although not perfected yet, it does offer worth while possibilities. The principal and other teachers as well as the County Superintendent and Director of Instruction were pleased."

"This summers project proved that the telelecture method holds great possibilities in the field of education. Though plagued with technical problems in the beginning, I feel this was helped greatly due to hard work and cooperation. We must be willing to experiment to progress in education and I believe the telelecture method is a step in the right direction towards this progress."

"The telelecture was very good but the speaker system needs to be improved so the conferences could be heard better. Two of the lectures were very good but there was a lot of feed back on the others."

"While talking to Dr. Brown I could hear (the phone went dead) certain words being cut out although I was depressing my push-to-talk button as hard as possible. Loose connection? Didn't seem to be apparent in 2nd conference but may not have talked as long."

"The reception of a few of the participating teachers was very poor."

"I chose the middle of the road for my responses because it started out fine. I could hear well and be heard. About the middle of the conference a squeal developed on my line which made hearing very painful. I tried to establish contact and could not be heard."

"I have enjoyed teaching the Readiness Book. I like the Satellite Head Start Network. I enjoyed the many ideas which were exchanged over the network. I think it would be most stimulating if the people who wrote the Readiness Book could exchange ideas with us over the network."

"I have no suggestions except for the first color that we called red is really orange and the fox, Pat's shirt, strawberry, cherries,etc. are red. Only confusion I had in my room. Maybe if publishers would correct the colors in next issues it might help."

"I really enjoyed the telelecture conferences and feel like it was very helpful to me. Thanks for letting me be a part of the telelecture program."

"If everyone covered the same number of pages in the book, then future conferences might be more beneficial because everyone would be on the same lesson.Plans and different methods could be suggested for the lessons for the next week."

"In future experiments, a separate line instead of an extension would help greatly. I know that people on the other line were told a number of times not to pick up the phone, this happened during the telelecture."

" A one day workshop for us to learn how to speak properly over the speaker phone, enunciation, voice control, speed,etc."

"The feedback was very bad. When it did not occur, everything was fine."

"This telelecture was better by 100%. The use of the additional on-off box makes reception and transmission easier."

"I have the greatest admiration for the officials of the phone company who can maintain their composure and charm in light of the situations we've had in our calls!"

"Voices came in clear, but we were cut off. This was our first conference and we can offer suggestions after another conference."

" We missed the first two. The third was good and promises to have tremendous possibilities for in-service training for teachers."

" I am having to speak from the regular telephone in order to be heard in Charleston. My local telephone man insists that the "push-to-talk" button is properly installed. I do not understand why it does not work. I feel that I may be contributing to the extra noise by having an open telephone during the conference."

"If certain places are causing feedback, hook these up first and try to clear before calling others."

"I learned that by placing the speaker away from a window and on a wooden object it was improved very much."

"It is impossible to rate telelecture # 2 due to faulty reception."

"When my phone was established, I was told to sit as far away from the spokesman as possible and I also keep my back to it when talking. Have had no trouble with feedback but that may be because of good connection."

"If the volume of the central lecturer were increased the volume controls at other points could be turned down. Would this help eliminate feedback but still allow participating teachers to hear the central lecturer clearly?"

"Elimination of squealing noise on the wire which makes listening almost impossible."

"I was very excited with this conference. I could hear very well and received some good suggestions."

"I have had telephone service men during the conferences to help iron out difficulties on my set. Some others might try that. Just call telephone service. They have been most cooperative with me."

"I thought the first conference was excellent."

"I enjoyed the sharing of experiences. Listening to the varied teaching suggestions was stimulating for me. I even came up with a few ideas of my own."

"Different suggestions and different approaches given by the teachers were quite helpful to me in helping pre-school children to master the content work of the book."

"The telelecture in this project was very interesting when reception was good. When the reception was poor, the lecture seemed long and tiresome. Many ideas and suggestions from other teachers were quite helpful in teaching my class."

"I think the telelecture has good possibilities. My particular hook-up was not good. There was a lot of interference, especially when people spoke from other schools. I could hear Charleston much better. My voice did not transmit well either. I feel that this could be probably overcome with better facilities. The idea of teachers helping each other through sharing experiences is sound."

V CONCLUSIONS AND RECOMMENDATIONS

As will be recalled, the specific purposes of the Head Start telelecture project were two-fold. They were stated as follows:

1. To measure teacher reaction to the use of telelecture.

2. To assess the technical considerations necessary to making telelecture services operational for teacher training in Appalachia.

The narrative and statistical data obtained indicate that teacher reaction to the telelecture medium was highly satisfactory. Despite delays and inconveniences resulting from technical difficulties, teacher enthusiasm was high, and attendance at the sessions was close to perfect. All participants seemed to place particular value on the fact that telelecture gave them the opportunity to participate directly in the discussions. This participation seemed to increase their involvement in the project and to make them more attentive to the comments of the coordinator and other participants.

Given the informal design of the telelecture project, it is impossible to determine whether or not the telelecture series actually contributed to improved use of the BRL materials by the participating teachers. In the teachers' opinion, the telelecture was helpful; but there is no statistical evidence to show that this was indeed the case.

Perhaps the most obvious dividend gained by the teachers from the telelecture hookup was the continuing interaction which they

were able to achieve with others using the same materials. Each of the participants traded suggestions freely with others. They seemed to take particular delight in knowing that others were participating in a "simultaneous" teaching project.

Based on experience with the Head Start telelecture project, it would appear reasonable to make the following generalizations:

1. Assuming proper telephone service and facilities, the multi-way telelecture conference is a feasible in-service tool for teacher education in Appalachia.

2. Teacher reaction to the telelecture medium can be generally predicted to be generally enthusiastic and positive.

3. The use of telelecture appears to enhance teacher interest in the use of the materials discussed in telelecture conferences.

Further research of an experimental nature is needed to determine whether or not telelecture in-service courses are of sufficient value in improving teaching to be worth including in operational Educational Cooperatives.

Recommendations

Because the Head Start telelecture project was a feasibility study, its most important contribution lies in the information which it can provide concerning the future use of telelecture as an in-service tool.

The following recommendations are made in this regard:

Selection of Sites. Care should be taken in the selection of sites for telelecture participation. In many areas of Appalachia, telephone service is provided by small independent companies who do not operate with the skill and efficiency of larger affiliates.

In these instances, proper installations of telelecture equipment are difficult to achieve. Feedback on the lines is also apparent. Furthermore, many of the schools in these areas are served by party lines. These, of course, are quite undersirable for telelecture use because of the possible interference by outside parties on the line during the course of the conference.

When more than one circuit is to be established as part of a telelecture network, it is strongly recommended that rural areas which have poor telephone service be placed on relatively small circuits. These smaller circuits provide better reception and are also easier to re-establish when difficulties arise. Schools in urban areas served by larger telephone companies may successfully be hooked to larger circuits because both equipment and service are more dependable.

Training of Participants. It became obvious during the course of the telelecture series that participants needed far more instruction in the use of the telelecture equipment than they had received. It is therefore recommended that the following guidelines be observed in the implementation of future telelecture programs:

1. Participants should receive a thorough introduction to the use of telelecture equipment, with specific emphasis on the importance of speaking slowly and distinctly and on physical placement of the telelecture apparatus. (Speakers should be placed as far as possible from the transmitting equipment to avoid feedback. They should also be turned to face away from the transmitting equipment.)

2. Participants should be requested not to leave the telephone area after they have been placed on the conference circuit. It is necessary for the conference operator to continually poll conferees to check the circuit, and when a

participant does not reply to the poll, the conference is considerably delayed while contact is re-established.

3. Whenever possible, the telelecture coordinator should visit each telelecture location before the first conference is held. During this visit, the coordinator can give personal instruction to each participant and can also familiarize herself with the locale and the individuals who will be listening as observers.

Selection of Equipment. Careful planning must be devoted to the selection of equipment before telelecture conferences are undertaken. The following recommendations are made for future telelecture use:

1. The number of points to be hooked to a single circuit should be held to a minimum. Although it is now technologically possible for C & P telephone company to connect fourteen points in a two-way conversation, the feedback on the lines and the time required for establishing the call detract from its overall effectiveness. It would appear to be far more satisfactory for the present to increase the number of participants at each telelecture location and decrease the number of points on each conference call. A "comfortable" number of points would seem to be between seven and ten. The use of fewer points detracts from the excitement and variation of the conference call, and the use of a greater number contributes substantially to technological difficulties.

2. The C & P recommendation to use Spokesman units with push-to-talk handsets instead of traditional telelecture equipment appears to have been wise. The problem of equipment feedback was one of the most serious of the difficulties encountered during the project, and it is reasonable to assume that this feedback would have been measurably increased if the several locations had been equipped with the "open feed" transmitting units characteristic of usual telelecture equipment.

3. The two-way capability of the equipment used in the Head Start project contributed measurably to the success of the project. Although it is conceviable that equally as much information could have been transmitted to the participants in a one-way hookup (which would have allowed the connection of 49 points instead of only 14), the participants would not have had the feeling of involvement that was apparent

throughout the two-way series. This involvement was, in the opinion of the project coordinator, one of the most promising features of the telelecture idea.

4. Participants should supply the telephone numbers for their respective schools when they register for the telelecture series. This prior information saves considerable research for the telephone conference operator.

5. Whenever possible, the equipment for the telelecture conferences should be installed in an office or classroom where the teacher can be productively employed while she is waiting for the conference hookup. In several instances during the Head Start series, the telelecture equipment was installed on the telephone in the school office and teachers were prone to wander back to their classrooms while waiting for the full circuit to be established. This meant that they often did not respond when they were polled by the conference operator, thereby delaying the beginning of the conference.

6. The Bell telephone laboratories are now working on more sophisticated equipment for telelecture service. This equipment is expected to increase the number of points which may be hooked to a single circuit as well as to increase the quality of reception and transmission. A careful check should be made at the time of initiation of future telelecture work to ascertain whether or not this developmental equipment is yet available.

Preparation of the Conference Coordinator. It is particularly important that the conference coordinator be equipped with the correct apparatus and physical environment for conducting a good conference call. It is the conference coordinator who gives a conference its "spark", and who holds participants together when attention and interest begin to ebb. The following strong recommendations are made in this regard:

1. Whenever possible, the conference coordinator should be accompanied at the central conference center with a telephone company representative who can give advice when technological problems arise. This representative can be especially helpful in working with the conference operator in setting up the calls and in reducing interference from feedback on the line.

2. Conference calls should be conducted from a small, quiet area. It is crucially important that the conference coordinator be able to hear and respond to all comments and questions made by participants. The slightest bit of background noise can severely interfere with reception, thereby forcing the coordinator to call for a "repeat" of the participant's suggestion. This has a severe depressing effect on the conference call and serves to lose attention and interest.

3. The conference coordinator should be comfortably seated at a desk or table and should have a place for recording notes. Frequently during the course of a call, the coordinator's response to a comment will have to be delayed while other people are speaking. It is helpful for the coordinator to be able to note her desire to make this delayed response so that it is not forgotten as the call progresses. It is also helpful to make brief notes of participant's comments so that they may be reviewed on succeeding calls.

4. The central conference location should be equipped with special telelecture apparatus for improving voice transmission. This apparatus helps make reception clearer for participants on the circuit.

5. The conference coordinator should whenever possible, observe the following suggestions for conference management.

a. Speak deliberately and slowly in a deep, attention-commanding voice.

b. Be <u>sure</u> to be equipped with a list which gives the names, locations and phone numbers of all participants. Photographs of participants are also helpful if available.

c. Begin the conference with several specific items to draw attention. Make clear the direction in which the conference is intended to proceed, and give ample warning to the kinds of questions you will ask so that conferees will know what to expect and can be prepared.

d. Poll conferees frequently by addressing them in a "roll'call voice" by name and location. ("Mrs. Richardson at Hamerville...Let's hear from you on that subject...")

e. Make clear to conferees that they must always identify themselves before speaking. When an open question to all conferees is posed, several may want

to respond. The only organized way in which to achieve this is to require that conferees express their desire to speak by stating their name and location. The conference coordinator can then proceed to recognize each person, one by one.

f. Refrain carefully from asking questions like, "Does everyone understand?". The result is usually a muddy mix of affirmatives and negatives -- or else complete silence. A better way to phrase the question would be, "If you do not understand this item, please identify yourself and I'll try to clarify my statement."

g. Make a concerted attempt to remember at least one or two personal characteristics of each participant and refer to them occasionally to maintain the spirit of the call. Statements like, "Mrs. Smith, you gave us some good suggestions last week -- do you have any more to offer today?" are helpful in encouraging listner response.

h. Whenever possible follow up each conference with a written memorandum summarizing the conference or building upon items which were discussed. This lends continuity to the series and helps prepare participants for coming lectures. Personal notes jotted on these form memos are helpful in building the interpersonal ties which are <u>essential</u> in conducting a good telelecture series.

i. Ask conferees to have the material to be discussed easily available nearby during the conference. When all conferees are equipped with the same materials, they can refer to them easily. This helps improve communications and lends stability to the conference proceedings.

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